

U.S. Serial No. 10/044,015
Atty Docket: 24069B

Amendments to the Claims:

9. (Currently Amended) An apparatus for the substantially continuous preparation and application of a size composition to glass fibers, comprising an in-line mixer for preparing the size in flow communication with [[an]] a size applicator to applying said size to said fibers, wherein said in-line mixer comprises at least a first and a second stage serially connected to each other, said first stage comprising a first tubular chamber having an inlet end and an outlet end, means within said first chamber for uniformly mixing materials introduced therein with a carrier fluid flowing therethrough, a means connected to said inlet end of said first chamber for introducing a controlled amount of a carrier fluid into said first chamber, and at least one means connected to said first chamber for introducing into said chamber a controlled amount of a component material to be mixed with said carrier fluid; and a second stage comprising a hydrolyzer chamber and second tubular chamber having an inlet end and an outlet end, wherein said inlet end of said second chamber is in flow communication with said outlet end of said first chamber.

10. (Canceled)

11. (Currently Amended) The apparatus of claim [[10]] 9, wherein said means for introducing a controlled amount of a component material to be mixed with said carrier fluid comprises an injector mounted in said first tubular chamber for injecting materials into said chamber, and a flow regulator connected to said injector for regulating the amount of said component material introduced through said injector.

12. (Original) The apparatus of claim 11, wherein said flow regulator comprises an adjustable output pump and flow meter.

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13. (Currently Amended) The apparatus of claim [[10]] 9, wherein said means for introducing a controlled amount of a component material to be mixed with said carrier fluid comprises at least one injector mounted within a cylindrical ring having an internal diameter substantially the same as said first chamber, said ring being affixed to said first chamber upstream of said outlet end and in flow communication therewith; and a flow regulator connected to said injector for regulating the amount of said component material introduced through said injector.

14. (Original) The apparatus of claim 13, wherein said flow regulator comprises an adjustable output pump and flow meter.

15. (Original) The apparatus of claim 14, wherein a plurality of injectors, each connected to an adjustable output pump, are mounted within said cylindrical ring for introducing controlled amounts of a plurality of different component materials.

16. (Currently Amended) The apparatus of claim [[10]] 9, wherein said second tubular chamber is larger in diameter and in length than said first tubular chamber.

17. (Original) The apparatus of claim 16, further comprising at least one means for introducing a controlled amount of a component material into said second chamber.

18. (Currently Amended) The apparatus of claim [[10]] 9, further comprising a third stage, comprising a third tubular chamber having an inlet end and an outlet end, wherein said inlet end is in flow communication with said outlet end of said second chamber; and means within said third chamber for mixing materials flowing therethrough.

19. (Currently Amended) The apparatus of claim 18, further comprising at least one injector mounted within a cylindrical ring having an internal diameter substantially the same as said second chamber, said ring being affixed to said outlet end of said second chamber and in introduction of a controlled amount of a component material to the fluid

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entering the third chamber; and a flow regulator connected to said injector for regulating the amount of said component material introduced through said injector.

20. (Original) The apparatus of claim 18, further comprising at least one injector mounted within a cylindrical ring having an internal diameter substantially the same as said third chamber, said ring being affixed to said third chamber and in flow communication therewith to permit the introduction of a controlled amount of a component material to the fluid flowing through said third chamber; and a flow regulator connected to said injector for regulating the amount of said component material introduced through said injector.

21. (Currently Amended) The apparatus of claim ~~[[10]]~~ 9, further comprising a means for monitoring the application rate of said size to said glass fibers and automatically adjusting the volumes of carrier fluid and component materials introduced into said mixer to maintain a substantially constant supply of size at the applicator ~~[[reservoir]]~~.

22. (Currently Amended) The apparatus of claim ~~[[10]]~~ 9, further comprising a means for monitoring the concentration of a component material in said size between said mixer and applicator and automatically adjusting the volumes of the carrier fluid and component materials introduced into said mixer to maintain said concentration at a substantially constant value.

Claims 23-24 (Withdrawn)